

The opinion in support of the decision being entered today was **not** written for publication and is **not** precedent of the Board.

Paper No. 24

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte LOUIS J. SHRINKLE

Appeal No. 1998-0817
Application 08/610,976

ON BRIEF

Before JERRY SMITH, FLEMING and BARRY, **Administrative Patent Judges**.

FLEMING, **Administrative Patent Judge**.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 14-24. Claims 1-13 have been canceled.

The invention relates to controlling a frequency at which data are written onto a disk in a disk drive system. On page 6 of the application, Appellant discloses that figure 2 shows

a disk drive system that embodies the invention and includes a microprocessor 9 for controlling the overall operation of the disk drive system, a read channel 10 for recovering data read from the disk, a write channel 12 for writing data onto the disk, an a digital phase locked loop 11 for providing a read clock to the read channel 10 and a write clock to the write channel 12, and a reference oscillator 13 connected to the phase locked

loop 11 to act as the center frequency of operations of the phase locked loop to which correction will be made. On pages 7 and 8 of the application, Appellant discloses that the speed of the spindle motor of the disk drive system is monitored to detect differences between the specified nominal speed to the spindle motor and the actual speed of the spindle motor.

Microprocessor 9 generates a digital correction value for use by the phase locked loop that would change the write clock frequency of the phase locked loop so as to compensate for the variation in the speed of the spindle motor.

Independent claim 14 is reproduced as follows:

14. An apparatus for generating an adjusted clock signal having a frequency and phase based on format data in a record stored on a rotating disk in a disk drive system, the

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apparatus comprising:

means for reading the format data in the record stored on the rotating disk;

a phase locked loop responsive to the format data for generating a first clock signal;

means for monitoring actual rotational speed of the rotating disk; and

means responsive to the monitoring means for controlling the phase locked loop to adjust the first clock signal to have a frequency and phase that is compensated for changes in the actual rotational speed of the rotating disk.

The references relied on by the Examiner are as follows:

Gold	5,231,545	Jul. 27,
1993		
Rooke	5,535,067	Jul. 9, 1996

Claims 14-20 and 22 through 24 stand rejected under 35 U.S.C. § 102 as being anticipated by Rooke. Claim 21 stands rejected under 35 U.S.C. § 103 as being unpatentable over Rooke in view of Gold.

Rather than repeat the arguments of Appellant or the Examiner, we make reference to the briefs¹ and answer for the

¹ Appellant filed an appeal brief on June 6, 1997. Appellant filed a reply brief on October 2, 1997. The Examiner mailed a communication on October 15, 1997 stating that the reply brief has been entered and considered.

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details thereof.

OPINION

After careful review of the evidence before us, we do not agree with the Examiner that claims 14-20 and 22-24 are anticipated by the applied references.

It is axiomatic that anticipation of a claim under § 102 can be found only if the prior art reference discloses every element of the claim. **See In re King**, 801 F.2d 1324, 1326, 231 USPQ 136, 138 (Fed. Cir. 1986) and **Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.**, 730 F.2d 1452, 1458, 221 USPQ 481, 485 (Fed. Cir. 1984).

On pages 6 and 7 of the brief, Appellant points out that claim 14 recites:

A phase locked loop responsive to format data
for generating a first clock signal;

means for monitoring actual rotational speed of the
rotating disk; and

means responsive to the monitoring loop means for
controlling the phase locked loop to adjust the
first clock signal to have a frequency and phase
that is compensated for changes in the actual

rotational speed of the rotating disk.

Appellant further points out that Rooke describes a multiplexer 30 to permit selection of a reference signal source as either reference signal 17 read from a disk or reference signal 29 originating from the spindle control provider. Appellant argues that Rooke does not teach using both signals, only that a choice may be made between the two signals. Appellant argues that Rooke does not lock onto a frequency of the data recorded on the disk and does not adjust a write clock signal generated based upon a data frequency for the spindle speed variation. On pages 11 through 12, Appellant further argues that Rooke does not disclose a phase locked loop as required by claim 14.

The Examiner states on page 3 of the answer that the rejection is set forth in paragraph 3 of the prior office action, paper no. 12. Turning to the prior office action, we find that in regard to claim 14, Examiner states that Rooke teaches means for reading format data, (6 and 17), a PLL, (28), means for monitoring actual rotation speed, (3), and means responsive to monitoring means for controlling the PLL to adjust the first clock signal to a frequency and phase that

is compensated for change in the actual rotation speed, (3).
Examiner points to figure 8.

Turning to Rooke, we find that Rooke teaches in col. 7, lines 14-21, that figure 8 depicts a disk drive system allowing a selection of reference signals through a multiplexor (30). Rooke states that a choice is given between reference signal 17 originating from the disk pattern and a reference signal 29 originating from the controller pattern. We fail to find that Rooke teaches a means responsive to the monitoring means for controlling the phase locked loop to adjust the first clock signal to a frequency and phase that is compensated for changes in the actual rotational speed of the rotating disk.

We find that Appellant's claim 18 recites "means for compensating the generated clock signal during the write operation as a function of the actual rotating speed of the rotating disk, to produce a corrected clock signal." We note that Appellant's claim 19 recites "compensating the generated clock signal during the write operation, as a function of the actual rotational speed of the rotating disk, to produce a corrected clock signal." We also note that Appellant's claim

20 recites "a phase locked loop, in response to the control signals generated by the microprocessor, for receiving the format data read by the read channel during the write operation and for generating a clock having a frequency and phase that is equal to the frequency and phase of the format data read from the format portion of the record compensated for the deviation in the actual rotational speed of the disk from its nominal speed." We fail to find that Rooke teaches these limitations as well.

Therefore, we do not agree with the Examiner that claims 14-20 and 22-24 are anticipated by Rooke. Furthermore, we note that the rejection of claim 21 is based upon finding these limitations in Rooke. Therefore, we do not agree that claim 21 which is

dependent upon claim 20 is properly rejected under 35 U.S.C. § 103 as being unpatentable in view of Rooke and Gold for the reasons given above with respect to claim 20.

In view of the foregoing the decision of the Examiner rejected claims 14 through 24 is reversed.

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REVERSED

JERRY SMITH)	
Administrative Patent Judge)	
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MICHEAL R. FLEMING)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS AND
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